



# XO<sup>TM</sup> Dedicated Internet Access (DIA) Burstable Billing Explanation

## Burstable Product - Billing Explanation

### Burstable Product - 95th Percentile Measurement

Bandwidth utilization is measured as the 95th percentile of sustained traffic, in bits per second (bps), to and from a port or host. The 95th percentile is calculated by taking usage samples every 5 minutes, and at the end of a monthly billing cycle all the 5-minute samples are sorted highest to lowest and the highest 5 percent of the samples are discarded. This is equivalent to approximately 1.5 days, or 36 hours of usage. The highest remaining 5-minute sample obtained is the 95th percentile. This method of billing provides the customer with a number of advantages. Any usage bursts that are untypical of their bandwidth usage are not charged to them; this equates to receiving 36 hours of the highest bandwidth usage at no charge each month.

### Basic Assumptions & Rules

- XO takes a “sample” snapshot of utilization every 5 minutes for a billing cycle
- At the end of the billing cycle XO sorts the data high to low and discards the top 5% of samples obtained
- The usage seen is then measured against a commitment level that the customer has chosen previously.

### An Example of the Measurement

- 60 minutes in an hour divided by the 5 minute sample rate = 12 samples per hour
- 12 samples per hr x 24 hours per day = 288 samples per day
- 288 samples per day x 30 days per month (average) = 8640 samples per month
- 8640 samples per month x 0.5 = 432 high end samples to be discarded to yield 8,208 samples
- This implies that high end sample # 433 would be the sample, for example, that is now reviewed at a 2Mbps commitment level.
- Assuming that 1Mbps of overage is observed over the commitment level at 2Mbps, we have the cost per Mbps of 1Mbps over the 2Mbps commitment, PLUS their standard Monthly Recurring Charge (for the original commitment amount). This is the total MRC for that month's billing period.

### Seeing the Actual Usage

By using the [XOstats](#) program as provided by XO, the customer can observe the usage from their Internet port on XO to get an idea of what the upcoming billing event will look like. XO gives the customer access to XOstats via the web to view their Daily, Weekly, Monthly usage. XO also provides a Multi Router Traffic Graph (MRTG) report to show the customer's graphical usage at any time in the monthly period.